wall of the stomach near the pylorus. He lived four or five days after the operation. He had been a hard drinker, and died apparently from delirium tremens, as he manifested all the symptoms of that condition, and there was no evidence of spread of the peritonitis. This man had been treated for three years for gastric ulcer, and operation revealed adhesions between the stomach and liver; these probably had ruptured and allowed the escape of material which had been held between the two organs, thus giving rise to the acute peritonitis.

GASTRO-ENTEROSTOMY FOR ULCER OF THE ANTERIOR WALL OF THE STOMACH, NEAR THE PYLORUS.

DR. DA COSTA reported a third case in which an operation had been performed for ulcer of the anterior wall of the stomach, near the pylorus. He performed gastro-enterostomy, according to the method recently described in the ANNALS OF SURGERY, by Scudder, of Boston. In case of performance and in perfect cleanliness, he found the operation most satisfactory.

After its performance,—that is, the day after the operation,—this patient vomited quantities of bile. The second day after operation, this condition still continuing, he was obliged to consider what he could do for the girl if it was not quickly arrested. Fortunately, however, it was arrested by frequently washing the stomach; but the development of the vomiting led him to think that a serious objection to Scudder's operation is that, should a vicious circle be formed, it could not be remedied by entero-anastomosis, on account of the bowel having been picked up too close to the duodenojejunal junction.

The following facts seem perfectly clear:

1. If a vicious circle exists after this operation, entero-anastomosis is impossible; and there is open only one of two methods: First, as was suggested by Dr. Francis Stewart, ligation of the pylorus; and, second, as occurred to him, the opening and drainage of the gall-bladder. This suggestion may have been made before, but he was not aware of it.

He did not know what percentage of the bile that comes down the hepatic duct is taken externally when the gall-bladder is drained, but certainly a great quantity of it escapes. If one could by this method remove a large percentage of the bile that

would otherwise enter the duodenum, one would thus intereept a great amount of the bile that would otherwise enter the stomach; and it seemed to him that this method of procedure should at least be thought of in any case of vicious circle. This patient, fortunately for her, recovered without the employment of either of these procedures.

It has been affirmed by some operators that the vicious eirele does not oeeur after posterior gastro-entcrostomy; but, personally, he believed that it may oeeur after any form of gastro-enterostomy, if the pylorus is open.

Dr. William L. Rodman regarded as most valuable the suggestion of Dr. Da Costa to drain the gall-bladder for overeoming the vicious cirele following gastro-enterostomy. This sequel is not so apt to follow posterior gastro-enterostomy, but it does follow both the anterior and postcrior mcthods, and perhaps more frequently than is generally admitted. One surgeon recently stated that a large number of his cases developed the vicious eirele. Dr. Rodman is surprised that no one has before suggested the expedient mentioned by Dr. Da Costa, and in a futurc case he would not hesitate to employ it.

Dr. Robert G. Le Conte could not see that, in eases of vicious eirele after gastro-enterostomyy, any advantage would be derived from draining the gall-bladder. Reasoning from analogy, where the gall-bladder is drained and no obstruetion exists in the eystie duct, large quantities of bile will be drained off from the gall-bladder, but at the same time the eolor of the stools remains normal, showing that a eonsiderable portion of the bile must escape through the eommon duct into the bowel.

In the vicious cirele no obstruction to the common duct exists, and it did not seem to him that much would be gained by opening the gall-bladder and draining off the bile that enters that organ while the remainder passed freely into the intestine. Where the vomiting is obstinate after gastro-enterostomy, and is not relieved by washing out the stomach and the sitting posture, he believes the obstruction is generally due to adhesions, and nothing short of an exploration of the field of operation should be attempted.

Dr. Francis T. Stewart said he had been convinced of the plausibility of Scudder's operation which had been mentioned in the case reported. In two eases of gastro-enterostomy in which

he had employed this technique, the vicious circle was established. One patient died, the other vomited for days, and finally recovered after refusing a second operation. Dr. Stewart's intention in this case, had permission to operate been obtained, was to ligate the pylorus or some point near it. He does not believe that drainage of the gall-bladder would aid recovery in these cases. Scudder's operation differs from Moynihan's in location, being at the beginning of the jejunum, and thus rendering entero-anastomosis impossible.

Dr. Da Costa, in closing, said that Dr. Le Conte had raised an important point regarding the utility of draining the gall-bladder in cases of vicious circle. Dr. Le Conte is of the opinion that only a part of the bile passes externally after draining the gall-bladder. This same point had occurred to Dr. Da Costa; but he thought that such a large amount passes externally that the stomach would be considerably protected by the procedure, for it seems to have been demonstrated that after every gastro-enterostomy some bile enters the stomach, and that a small amount of bile apparently produces little or no disturbance. The disturbance occurs only when there is a quantity of bile; and, by taking a large amount externally every day, one would certainly diminish greatly the amount that would be present in the duodenum and which could enter the stomach.

Dr. Da Costa, of course, recognizes the fact that the suggested expedient is a pure experiment, and might completely fail on trial; but he believes that, had the vomiting continued in the case reported, a trial of the operation would have been justifiable. Dr. Le Conte's objection that this would not prevent the intestinal contents from points further down from entering the stomach did not seem weighty to Dr. Da Costa, as he does not believe that in most of these cases any of the intestinal contents from farther down reaches the stomach. If it should do so, it would give evidences of its presence; and these evidences would, of course, contraindicate the operation of draining the gall-bladder.

NEPHROLITHOTOMY.

Dr. Gwilym G. Davis reported four cases in which he had removed renal calculi by incision into the kidney.

Case I.—Laborer, aged thirty-three years. Six years ago